# MEMORANDUM OF UNDERSTANDING between the U. S. NUCLEAR REGULATORY COMMISSION and the U.S. DEPARTMENT OF ENERGY for the GLOBAL NUCLEAR ENERGY PARTNERSHIP

# I. Background

The U.S. Department of Energy's (DOE's) ongoing Advanced Fuel Cycle Initiative (AFCI) is focused on developing technologies that can reduce the volume and toxicity of high-level waste from spent fuel requiring geologic disposal, reduce the proliferation threat posed by civilian inventories of plutonium in spent fuel, and provide proliferation-resistant nuclear power technologies. In February 2006, the Administration announced the Global Nuclear Energy Partnership (GNEP), part of the President's Advanced Energy Initiative aimed at advancing three identified ways to meet the challenge of generating more electricity -- clean coal technology, advanced emission-free nuclear power, and renewable resources, such as solar and wind. The GNEP contributes to the Advanced Energy Initiative by providing the framework for an international plan to manage spent nuclear fuel, enhance the nuclear energy option, and provide safe and secure nuclear power to foreign countries. The AFCI is the main U.S. component of the GNEP.

As part of the domestic GNEP effort, DOE plans to pursue three facilities that would support a proliferation-resistant closed U.S. nuclear fuel cycle -- (1) a nuclear fuel recycling center, to separate the components of spent fuel [also referred to as the Consolidated Fuel Treatment Center (CFTC)]; (2) an advanced recycling reactor to burn the actinide-based fuel, to transform the actinides in a way that makes them easier to store as waste, and to produce electricity [also referred to as the Advanced Burner Reactor (ABR)]; and (3) an advanced fuel cycle research facility, to serve as a research and development (R&D) Center of Excellence for developing transmutation fuels and improving fuel cycle technology [also referred to as the Advanced Fuel Cycle Facility (AFCF)]. The AFCF would be a DOE controlled and operated facility that is not subject to U.S. Nuclear Regulatory Commission (NRC) licensing.

# II. Purpose

The purpose of this Memorandum of Understanding (MOU) is to establish guiding principles for the exchange of information and the conduct of interactions between the DOE Office of Nuclear Energy (including its national laboratories) and NRC, regarding the development and demonstration of GNEP technologies and facilities that may be licensable by NRC. This cooperation will lay the basis for NRC's developing and quickly implementing a regulatory structure, should NRC be responsible for licensing and regulating any GNEP facility.

# III. Scope

This MOU covers consultations and information exchanges, between DOE and NRC, to facilitate effective and efficient development of information on facility design, technology, safety, security, and other relevant considerations that support the GNEP objective of development and deployment of advanced recycling technologies licensable by NRC. In particular, DOE and NRC interactions will include the following types of activities, as appropriate:

- (1) DOE's providing NRC information on advanced recycling technologies, permitting NRC to evaluate its licensability;
- (2) NRC's reviewing and providing feedback to DOE on GNEP reports and engineering studies, for the projects that DOE provides to NRC;
- (3) DOE's and NRC's participating in agency-to-agency routine periodic meetings and information exchange workshops;
- (4) NRC's participating in, and observing, DOE tests, simulations, and demonstrations, when DOE and NRC agree such participation would be useful;
- (5) NRC's reviewing literature and participating in facility tours, as established by DOE;
- (6) NRC's preparing, and providing to DOE, annual reports summarizing the work performed under this MOU.

Nothing in this MOU shall be construed to require DOE to acquire from NRC, or NRC to provide to DOE, any goods or services to DOE, except as may be set forth in the DOE-NRC Interagency Agreements ("IAs") established for this GNEP MOU.

This MOU applies solely to the facilities and/or activities related to GNEP, as mutually agreed to by DOE and NRC. Nothing in this MOU applies to, or establishes a precedent for any other MOU, matter, or agreement, including any other existing or future agreements, between DOE and NRC, for any other activity or facility owned, operated, or leased by, or for, DOE.

## IV. Roles and Responsibilities

# Project Support and Coordination

NRC and DOE will each be responsible for assigning a point of contact for the various GNEP projects where NRC and DOE mutually agree that involvement is necessary or beneficial, for the development of the GNEP facilities licensable by NRC. NRC and DOE will meet periodically, as mutually agreed on, to coordinate project activities. NRC and DOE may establish working groups to conduct project activities. DOE and NRC may choose to establish joint experimental and/or modeling/simulation activities, to provide data and analysis results for both parties.

## DOE Responsibilities

DOE will provide NRC with current information on prospective options for the GNEP facility design and technology (including, as appropriate, engineering, safety, safeguards and security analyses and data), as well as the technology development programs and plans, and schedules that support those options.

DOE will arrange information exchange workshops as well as facility and site tours for the pertinent NRC staff working on the GNEP projects.

# NRC Responsibilities

NRC will establish and subsequently maintain and augment its GNEP technology knowledge base.

NRC will be responsible for: (1) developing information to evaluate the ways in which NRC licensing requirements need to be adapted or developed for the various GNEP facilities; (2) identifying and developing analytical tools that it will need, to independently verify the GNEP facility design and its safety and safeguards/security performance; (3) planning and implementing any R&D activities that NRC will need to conduct to review any GNEP facility license application; and (4) developing preliminary estimates of projected NRC resources (e.g., schedule, funding) that may be needed in the future for GNEP. NRC will be responsible for providing this information to DOE to facilitate and enhance DOE's design, technology, and development activities related to the GNEP facilities.

NRC may be responsible for the licensing review of any application that may be submitted to it for a GNEP facility. NRC will have sole responsibility for making any final judgments regarding the basis for licensing such a GNEP facility.

# V. Terms of Agreement

#### DOE and NRC Interrelationships

Although a free exchange of information and views is essential for the success of the GNEP projects, nothing in this MOU restricts or otherwise limits either NRC's or DOE's authority to exercise its full regulatory authority. This MOU in no way restricts either agency from undertaking or participating in any activity within its normal scope of activities, including interactions with other public or private agencies, organizations, or individuals.

DOE, in consultation with NRC, will determine the appropriate approach for enabling DOE national laboratories to support essential technology development activities, such as experiments, algorithm development, and advanced modeling/simulation, needed for the GNEP technology base and to support NRC's regulatory research needs. The results of this research may be used to support NRC's regulatory needs regarding GNEP. Potential conflicts of interest will be mutually resolved.

#### Public Involvement

DOE and NRC anticipate the dissemination of information to the public, as appropriate, on GNEP-related topics in the context of regularly scheduled public meetings.

## Information Sharing

The sharing of information between DOE and NRC will be consistent with each agency's legal obligations. Both agencies recognize the need to protect, from public disclosure, data and information exchanged between them, that fall within the definition of trade secrets, privileged, confidential commercial or financial information, or other information exempt from public disclosure, under the Atomic Energy Act of 1954, as amended, the Freedom of Information Act, as amended, and other applicable laws.

If one agency provides the other with non-public information, the recipient agency will not release the information outside the agency without the written consent of the other agency. This provision will apply to information obtained from either agency or its contractors and will apply to the posting of information for the general public on the Agencywide Documents Access and Management System and other publicly available Web sites or document rooms. Freedom of Information Act requests, Congressional requests, or other requests for documents will be referred to the agency that provided the non-public information for resolution.

## Funding and Authorizations

DOE enters into this MOU under the authority of Section 646 of the Department of Energy Organization Act (Pub. L. 95-91, as amended; 42 U.S.C. 7256).

All activities pursuant to this MOU are subject to the availability of appropriated funds and each agency's budget priorities.

This MOU is neither a fiscal nor a funds obligation document. Nothing in this MOU authorizes, nor is intended to obligate, either agency to expend, exchange, or reimburse funds, services, or supplies, or transfer or receive anything of value, or enter into any contract, assistance agreement, interagency agreement, or other financial obligation.

This MOU is strictly for DOE and NRC internal management purposes. This MOU is not legally enforceable and shall not be construed to create any legal obligation on the part of either party. This MOU shall not be construed to provide a private right of action for or by any person or entity.

Goods or services shall be provided under this MOU only after an appropriate IA has been signed by a representative of each party authorized to execute the IA. On signature by each party's representative, the IA shall constitute a valid Economy in Government Act order.

Agreement Amendment, Modification, and Termination Period

This MOU may be modified or amended only by written, mutual agreement of the parties. This MOU shall be effective on the date of signature, and shall remain in effect until its termination. Either party may terminate this MOU by providing written notice to the other party.

The termination shall be effective on the sixtieth (60<sup>th</sup>) calendar day following notice, unless a later date is set forth. In the event of termination, responsibility for all costs will continue as provided in the IAs.

### VI. Points of Contact

DOE and NRC assign the following senior managers as the key points of contact for this MOU. The senior managers are DOE's and NRC's official representatives and are authorized to act on the Agency's behalf.

DOE's Representative

Name: Richard Black

Title: Associate Deputy Assistant Secretary, Office of Nuclear Power

Deployment

Telephone: 301-903-0104 Fax: 301-903-5005

E-mail: richard.black@hq.doe.gov

DOE's Alternate

Name: Sal Golub

Title: Director for Fast Reactor Development

Telephone: 301-903-1636 Fax: 301-903-5057

E-mail: sal.golub@nuclear.energy.gov

NRC's Representative

Name: Robert Pierson

Title: Director, Division of Fuel Cycle Safety and Safeguards

Telephone: 301-492-3132
Fax: 301-492-3359
E-mail: rcp@nrc.gov

NRC's Alternate

Name: Yawar Faraz

Title: Sr. Project Manager, Technical Support Branch, Division of Fuel

Cycle Safety and Safeguards

Telephone: 301-492-3207 Fax: 301-492-3359

Email: yhf@nrc.gov

# **AGREEMENT**

Ituis A. Reyes, Executive Director for Operations U.S. Nuclear Regulatory Commission

7/13/07 Date

Paul W. Lisowski, Deputy Assistant Secretary for Fuel Cycle Management Office of Nuclear Energy U.S. Department of Energy

7/13/2007

Date